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EXAMINER
LIU, LIN

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/03/2007*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/03/2007*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

1.   This office action is responsive to communications filed on 12/03/2007.

Claims 1-24 are pending and have been examined.

2.   The information disclosure statement (I.D.S) filed on 12/03/2007 are considered.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4.   **Claims 8-14** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

5.   With regard to **claim 8,** the instant claim is directed towards a service discovery system with two service discovery agents, wherein these service discovery agents are simply application software (specification, page 13, lines 1-24) not yet being stored into a computer readable storage medium, thus they are software alone. Claim directed towards software alone is per se nonstatutory. Claims 9-14 are rejected under the same rationale as of claim 8.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7.   Claims **15-18** are rejected under 35 U.S.C 102 (e) as being anticipated by **Tsai et al. (publication no.: US 2005/0078644 A1).**

With respect to **claim 15,** Tsai teaches a network host, comprising:

means for receiving service discovery queries from a service discovery agent (Tsai, fig. 1, page 2, paragraph 11);

means for discovering services within a domain of the network host in response to the service discovery queries (Tsai, page 1, paragraph 10, and page 2, paragraph 11), wherein the domain of the network host includes a local service discovery protocol operating via local network (Tsai: page 1, paragraph 10, noted the location-based services, i.e: nearby restaurant, local-time synchronization) and a remote service discovery protocol operating via an Internet host (Tsai: page 1, paragraph 10, noted that the network includes the Internet access server 16);

means for providing information describing the services discovered within the domain of the network host to the service discovery agent, wherein the information is provided in a uniform format that is independent of the vocabularies and behaviors of the local and remote service discovery protocols (Tsai, page 2, paragraph 12 and page 4, paragraph 24, noted that the service information is changed into a format that can be read and displayed by wireless client device 22); and

means for accessing services within a domain of the service discovery agent (Tsai, page 2, paragraph 13).

With respect to **claim 16,** Tsai teaches the network host according to claim 15, further comprising means for providing access to the services within the domain of the service discovery agent to network entities within the domain of the network host (Tsai, page 2, paragraph 13).

In regard to **claims 17-18** the limitations of these claims are substantially the same as those in claims 15-16, but rather in computer instruction form. Therefore the same rationale for rejecting claims 15-16 is used to reject claims 17-18. By this rationale **claims 17-18** are rejected.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.   **Claims 1-14, and 19-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tsai et al. (publication no.: US 2005/0078644 A1)** in view of **Monroe (patent no.: US 6,130,917).**

With respect to **claim 1,** Tsai teaches a method for providing uniform service discovery through the use of a plurality of service discovery protocols, comprising:

generating service discovery queries from a user interface (Tsai, page 2, paragraph 11, noted that the wireless client 22 generates request);

wherein the domain of the network host includes a local service discovery protocol operating via local network (Tsai: page 1, paragraph 10, noted the location-based services, i.e: nearby restaurant, local-time synchronization) and a remote service discovery protocol operating via an Internet host (Tsai: page 1, paragraph 10, noted that the network includes the Internet access server 16);

receiving results indicative of services found from each of the plurality of service discovery protocols (Tsai, page 1, paragraphs 9-10, noted that the wireless protocols could be Bluetooth, UPnP, or SLP) in response to the service discovery queries (Tsai, page 2, paragraphs 11 and 13, noted that the wireless access point 12 receives service information from service discovery server 14); and

translating the results into a uniform format for display on the user interface, wherein the uniform format is independent of the vocabularies and behaviors of the plurality of service discovery protocols (Tsai, page 2, paragraph 12 and page 4, paragraph 24, noted that the service information is changed into a format that can be read and displayed by wireless client device 22).

However, Tsai does not explicitly teach a method of translating the service discovery queries into formats required by a plurality of service discovery protocols.

In the same field of Monroe teaches a method of translating the service discovery queries into formats required by a plurality of service discovery protocols (Monroe, fig. 3-5, col.4, lines 45-61, and col. 5, lines 13-40).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of translating the service discovery

queries into formats required by a plurality of service discovery protocols as taught by

Monroe in Tsai's to permit real time transmission regardless of data format and permits

transmission of source data to a variety of stations using protocols of either

transmitting/receiving stations (Monroe, col. 2, Summary Of the Invention).

With respect to **claim 2,** Tsai teaches the service discovery engine (Tsai, fig. 1,

Wireless Access Point 12). However, Tsai does not explicitly teach a method of

translating the service discovery queries into a format required by a service discovery

engine.

In the same field of Monroe teaches a method of translating the service discovery

queries into formats required by a plurality of service discovery protocols (Monroe, col.2,

lines 44-63).

With respect to **claim 3,** Tsai teaches the method according to claim 2, wherein

the service discovery engine compiles service discovery results in response to the

service discovery queries and provides the service discovery results to the user

interface (Tsai, page 2, paragraph 24, noted that the service information is displayed to

the wireless client device 22).

With respect to **claim 4,** Tsai teaches the method according to claim 3, wherein

the service discovery engine gains access to the plurality of services found (Tsai, page

2, paragraph 12).

With respect to **claim 5,** Tsai teaches the method according to claim 4, wherein

the service discovery engine provides access to the plurality of services found to a

plurality of network entities within a domain of the service discovery engine (Tsai, page

2, paragraph 13 and page 4 paragraph 24, noted that service information is transmitted to multiple wireless client devices within a coverage area).

With respect to **claim 6,** Tsai teaches the method according to claim 1, wherein the plurality of service discovery protocols includes Bluetooth service discovery protocol (Tsai, page 1, paragraphs 9, noted that the wireless protocols could be Bluetooth).

With respect to **claim 7,** Tsai teaches the method according to claim 1, wherein the plurality of service discovery protocols includes one or more of Service Location Protocol (SLP), Salutation, Jini, Bluetooth, and Universal Plug and Play (UPnP) (Tsai, page 1, paragraphs 9-10, noted that the wireless protocols could be Bluetooth, UPnP, or SLP).

With respect to **claim 8,** Tsai teaches a service discovery system, comprising:

a first service discovery agent coupled to receive service discovery queries in a user format (Tsai, fig. 1 and page 2, paragraph 11, noted that wireless access point 12 receives request from wireless client device 22), wherein the plurality of service discovery protocols include a local service discovery protocol operating via a local network (Tsai: page 1, paragraph 10, noted the location-based services, i.e: nearby restaurant, local-time synchronization) and a remote service discovery protocol operating via an Internet host (Tsai: page 1, paragraph 10, noted that the network includes the Internet access server 16); and

a second service discovery agent (Tsai, fig. 1, service discovery server 14) coupled to receive service discovery queries from the first service discovery agent and in response, to provide service discovery responses to the first service discovery agent

(Tsai, page 2, paragraphs 11-12, noted that service discovery server 14 delivers

information relating to discovered services to the wireless access point 12), wherein the

second service discovery agent is coupled to access services discovered by the first

service discovery agent (Tsai, fig. 1, page 2, paragraphs 11-12).

However, Tsai does not explicitly teach a method of translating the service

discovery queries into formats required by a plurality of service discovery protocols.

In the same field of Monroe teaches a method of translating the service discovery

queries into formats required by a plurality of service discovery protocols (Monroe, fig.

3-5, col.4, lines 45-61, and col. 5, lines 13-40).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of the invention to incorporate the method of translating the service discovery

queries into formats required by a plurality of service discovery protocols as taught by

Monroe in Tsai's to permit real time transmission regardless of data format and permits

transmission of source data to a variety of stations using protocols of either

transmitting/receiving stations (Monroe, col. 2, Summary Of the Invention).

With respect to **claim 9,** Tsai teaches the service discovery system according to

claim 8, wherein the first service discovery agent comprises a service configuration tool

coupled to allow first discovery agent operation independent of second service

discovery agent operation (Tsai, fig. 2 and page 2 paragraph 15).

In regard to **claim 10** the limitations of this claim are substantially the same as

those in claim 2. Therefore the same rationale for rejecting claim 2 is used to reject

claim 10. By this rationale **claim 10 i**s rejected.

With respect to **claim 11,** Tsai teaches the service discovery system according to claim 10, wherein the canonical query transform is configured with a programmable number of format capabilities (Tsai, fig. 2 and page 2 paragraph 16).

With respect to **claim 12,** Tsai teaches the service discovery system according to claim 11, wherein the programmable number of format capabilities is dependent upon a number of plug in modules installed within the canonical query transform (Tsai, fig. 2 and page 2 paragraph 16).

In regard to **claim 13** the limitations of this claim are substantially the same as those in claim 6. Therefore the same rationale for rejecting claim 6 is used to reject claim 13. By this rationale **claim 13** is rejected.

In regard to **claim 14** the limitations of this claim are substantially the same as those in claim 7. Therefore the same rationale for rejecting claim 7 is used to reject claim 14. By this rationale **claim 14** is rejected.

In regard to **claim 19** the limitations of this claim are substantially the same as those in claim 8. Therefore the same rationale for rejecting claim 8 is used to reject claim 19. By this rationale **claim 19** is rejected.

In regard to **claim 20** the limitations of this claim are substantially the same as those in claim 9. Therefore the same rationale for rejecting claim 9 is used to reject claim 20. By this rationale **claim 20** is rejected.

In regard to **claim 21** the limitations of this claim are substantially the same as those in claim 10. Therefore the same rationale for rejecting claim 10 is used to reject claim 21. By this rationale **claim 21** is rejected.

In regard to **claim 22** the limitations of this claim are substantially the same as those in claim 11. Therefore the same rationale for rejecting claim 11 is used to reject claim 22. By this rationale **claim 22** is rejected.

In regard to **claim 23** the limitations of this claim are substantially the same as those in claim 1, but rather in a computer instruction form. Therefore the same rationale for rejecting claim 1 is used to reject claim 23. By this rationale **claim 23** is rejected.

With respect to **claim 24,** Tsai teaches the computer-readable medium according to claim 23, further comprising instructions to perform steps comprising:

providing the service discovery queries to a network host (Tsai, fig. 1, page 2, paragraph 12); and

receiving responses from the network host in response to the provided service discovery queries (Tsai, fig. 1, page 2 paragraphs 11-12).

Response to Arguments

10.   Applicant's arguments filed on 12/03/2007 have been fully considered but they are not persuasive.

11.   After carefully reviewing the Applicant's remarks, the following is a list of Applicant's main concerns on the previous Office Action:

   a.   On page 10 of Applicant's remark, Applicant argues that Tsai fails to teach or suggest a service discovery entity that can utilize both a local service discovery protocol operating via a local network and a remote service discovery protocol operating via an Internet host.

b.   On page 11 of Applicant's remark, Applicant argues that Monroe does not inherently or expressly describe a network that uses "service discovery". And Monroe is silent on converting between service discovery protocols.

c.   On page 12 of Applicant's remark, Applicant argues that Monroe is silent regarding any automatic configuration of sending/receiving units that allow the units to discover services of the universal station, or properties of these services.

12.   With regard to argument **a,** the amended claims require that the services discovering is performed within a domain of a network host, wherein the domain of the network host includes local and remote service discovery protocols. Similarly, in the instant case of Tsai, Tsai discloses a method for services discovering in a network, wherein the network includes, location-based services (i.e: nearby restaurant, local-time synchronization), and Internet access server 16 (Tsai: page 1, paragraph 10).

13.   With regard to argument **b,** it appears that Applicant has a specific definition for "service discovery", which has not been included in the claims are presented. Therefore, the claims are interpreted by the examiner as broadly as possible in light of the specification. In the instant case, the term "service discovery" is given a general meaning in searching/finding/discovering for services in a network, which is explicitly taught by Tsai, page 1, paragraph 10. The purpose of Monroe is to serve as a secondary reference to remedy the communication conversions between different protocols. (i.e: Monroe, fig. 3-5, col.4, lines 45-61, and col. 5, lines 13-40, noted selecting a proper conversion technique for the compatible protocols.).

14.   In response to applicant's argument **c**, that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., Monroe is silent regarding any automatic configuration of sending/receiving units that allow the units to discover services of the universal station, or properties of these services) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

15.   Applicant has had an opportunity to amend the claimed subject matter, and has failed to modify the claim language to distinguish over the prior art of record by clarifying or substantially narrowing the claim language. Thus, Applicant apparently intends that a broad interpretation be given to the claims and the Examiner has adopted such in the present and previous Office action rejections. See In re Prater and Wei, 162 USPQ 541 (CCPA 1969), and MPEP 2111.

16.   Applicant employs broad language, which includes the use of word, and phrases, which have broad meanings in the art. In addition, Applicant has not argued any narrower interpretation of the claim language, nor amended the claims significantly enough to construe a narrower meaning to the limitations. As the claims breadth allows multiple interpretations and meanings, which are broader than Applicant's disclosure, the Examiner is forced to interpret the claim limitations as broadly and as reasonably possible, in determining patentability of the disclosed invention. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.1993).

17.   Failure for Applicant to significantly narrow definition/scope of the claims and

supply arguments commensurate in scope with the claims implies the Applicant intends

broad interpretation be given to the claims. The Examiner has interpreted the claims

with scope parallel to the Applicant in the response, and reiterates the need for the

Applicant to more clearly and distinctly defines the claimed invention.

Conclusion

18.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

19.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lin Liu whose telephone number is (571) 270-1447.

The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. L./
/Lin Liu/

Examiner, Art Unit 2145

/Jason D Cardone/
Supervisory Patent Examiner, Art Unit 2145